

SEQUENCE LISTING

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<120> IMMUNOGENIC COMPOSITIONS FOR INDUCTION OF ANTI-TUMOR IMMUNITY

<130> COHEN42

<140> 09/445,602

<141> 2000-03-23

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<150> IL 121041

<151> 1997-06-09

<160> 25

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<210> 1

<211> 104

<212> PRT

<213> Mus musculus

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Ala Thr Gly Glu Ala Gly Ala Ser Val Lys Leu Ser Cys Lys Ala Ser
 1 5 10 15

Gly Tyr Thr Phe Thr Ser Ser Trp Ile Asn Trp Val Lys Gln Arg Pro
 20 25 30

Gly Gln Gly Leu Glu Trp Ile Gly Glu Ile Asp Pro Ser Asp Ser Tyr
 35 40 45

Thr Asn Tyr Asn Gln Asn Phe Lys Asp Lys Ala Thr Leu Thr Val Asp
 50 55 60

Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu
 65 70 75 80

Asp Ser Ala Val Tyr Tyr Cys Ala Arg Leu Leu Arg Tyr Phe Ala Met
 85 90 95

Asp Tyr Trp Gly Gln Gly Thr Thr
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<210> 2

<211> 103

<212> PRT

<213> Mus musculus

<400> 2

Phe Leu Ser Cys Ile Ser Gly Ala Glu Gly His His Leu Ile Gln Gly
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Gln Gln Lys Cys Gln Tyr Ile Trp Leu Tyr Tyr Met His Trp Asn Gln
20 25 30
Gln Lys Pro Gly Gln Pro Pro Arg Leu Leu Ile Tyr Leu Val Ser Asn
35 40 45
Leu Glu Ser Gly Val Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr
50 55 60
Asp Phe Thr Leu Asn Ile His Pro Val Glu Glu Glu Asp Ala Ala Thr
65 70 75 80
Tyr Tyr Cys Gln His Ile Arg Glu Leu Thr Arg Ser Glu Gly Gly Pro
85 90 95
Ser Trp Arg Ser Ile Arg Ile
100

<210> 3
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<213> Mus musculus

<400> 3

Ser Trp Val Lys Pro Gly Ala Ser Val Lys Ile Pro Cys Lys Ala Ser
1 5 10 15
Gly Tyr Thr Phe Thr Asp Tyr Asn Met Asp Trp Val Lys Gln Ser His
20 25 30
Gly Lys Ser Leu Glu Trp Ile Gly Asp Ile Asn Pro Asn Asn Gly Tyr
35 40 45
Thr Ile Tyr Asn Gln Lys Val Lys Gly Lys Ala Thr Leu Thr Val Asp
50 55 60
Lys Ser Ser Asn Thr Ala Tyr Met Glu Leu Arg Ser Leu Thr Ser Glu
65 70 75 80
Asp Thr Ala Val Tyr Tyr Cys Val Arg Gly Gly Gly Leu Lys Gly Tyr
85 90 95
Pro Phe Val Tyr Trp Gly Gln Gly Thr Thr
100 105

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 <222> (90)..(90)
 <223> Xaa is any amino acid

<400> 4

Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Asn Phe Met His
 1 5 10 15
 Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Trp Ile Tyr Ser
 20 25 30
 Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ile Gly Ser Gly
 35 40 45
 Ser Gly Thr Ser Xaa Ser Leu Thr Ile Ser Arg Met Glu Ala Glu His
 50 55 60
 Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser Phe Pro Phe Thr Tyr
 65 70 75 80
 Gly Ser Gly Thr Lys Xaa Glu Ile Gln Xaa Asp Pro
 85 90

<210> 5
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<400> 5

Leu Gln Glu Ser Gly Pro Glu Leu Val Lys Pro Gly Ala Ser Val Lys
 1 5 10 15
 Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr Tyr Met Asn
 20 25 30
 Trp Val Lys Gln Ser His Gly Lys Ser Leu Glu Trp Ile Gly Asp Ile
 35 40 45
 Tyr Pro Asn Asn Gly Phe Thr Thr Tyr Asn Gln Lys Phe Lys Gly Lys
 50 55 60
 Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr Asn Glu Leu
 65 70 75 80

Arg Asn Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Ser
85 90 95

Gly Ser Arg Phe Asp Tyr Trp Gly Gln Gly Thr Thr Val His Arg
100 105 110

<210> 6

<211> 109

<212> PRT

<213> Mus musculus

<400> 6

Met Asp Ile Gln Leu Thr Gln Ser Pro Ala Thr Leu Ser Val Thr Pro
1 5 10 15

Gly Asp Ser Val Ser Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Asn
20 25 30

Asn Leu His Trp Tyr Gln Gln Lys Ser His Glu Ser Pro Arg Leu Leu
35 40 45

Ile Lys Phe Ala Ser Gln Ser Ile Ser Gly Ile Pro Ser Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Ser Ile Asn Ser Val Glu
65 70 75 80

Thr Glu Asp Phe Gly Val Tyr Phe Cys Gln Gln Ser Asn Ser Trp Pro
85 90 95

Val His Ala Arg Gly Gly Gly Thr Lys Leu Glu Asn Leu
100 105

<210> 7

<211> 112

<212> PRT

<213> Mus musculus

<400> 7

Leu Gln Glu Ser Gly Ala Glu Leu Val Arg Ser Gly Ala Ser Val Lys
1 5 10 15

Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Tyr Tyr Met His
20 25 30

Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile Gly Trp Ile
35 40 45

Asp Pro Glu Asn Gly Asp Thr Glu Tyr Ala Pro Lys Phe Gln Gly Lys
50 55 60

Ala Thr Met Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr Leu Gln Leu
65 70 75 80

Ser Ser Leu Ala Ser Glu Asp Thr Ala Val Tyr Tyr Cys Asn Phe Tyr
85 90 95

Gly Asp Ala Leu Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser
100 105 110

<210> 8
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<212> PRT
<213> Mus musculus

<400> 8

Pro Gln Asp Ile Gln Leu Thr Gln Ser Pro Leu Thr Leu Ser Val Thr
1 5 10 15

Ile Gly Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu
20 25 30

Asp Ser Asp Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro Gly
35 40 45

Gln Ser Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly
50 55 60

Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu
65 70 75 80

Lys Ile Asn Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp
85 90 95

Gln Gly Thr His Ser Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Lys
100 105 110

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<400> 9

Glu Ile Asp Pro Ser Asp Ser Tyr Thr Asn Tyr Asn Gln Asn Phe Lys
1 5 10 15

Asp

<210> 10
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<212> PRT
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<400> 10

Leu Leu Arg Tyr Phe Ala Met Asp Tyr
1 5

<210> 11

<211> 8
<212> PRT
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<400> 11

Gln His Ile Arg Glu Leu Thr Arg
1 5

<210> 12
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<400> 12

Asp Ile Asn Pro Asn Asn Gly Tyr Thr Ile Tyr Asn Gln Lys Val Lys
1 5 10 15

Gly

<210> 13
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<400> 13

Gly Gly Gly Leu Lys Gly Tyr Pro Phe Val Tyr
1 5 10

<210> 14
<211> 9
<212> PRT
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<400> 14

Gln Gln Arg Ser Ser Phe Pro Phe Thr
1 5

<210> 15
<211> 17
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<213> Mus musculus

<400> 15

Asp Ile Tyr Pro Asn Asn Gly Phe Thr Thr Tyr Asn Gln Lys Phe Lys
1 5 10 15

Gly

<210> 16
<211> 7
<212> PRT

<213> Mus musculus

<400> 16

Ser Gly Ser Arg Phe Asp Tyr
1 5

<210> 17

<211> 10

<212> PRT

<213> Mus musculus

<400> 17

Gln Gln Ser Asn Ser Trp Pro Val His Ala
1 5 10

<210> 18

<211> 17

<212> PRT

<213> Mus musculus

<400> 18

Trp Ile Asp Pro Glu Asn Gly Asp Thr Glu Tyr Ala Pro Lys Phe Gln
1 5 10 15

Gly

<210> 19

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<212> PRT

<213> Mus musculus

<400> 19

Tyr Gly Asp Ala Leu Asp Tyr
1 5

<210> 20

<211> 9

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<213> Mus musculus

<400> 20

Trp Gln Gly Thr His Ser Pro Leu Thr
1 5

<210> 21

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<400> 21

Tyr Tyr Cys Gln His Ile Arg Glu Leu Thr Arg Ser Glu Gly Gly Pro
1 5 10 15

Ser

<210> 22
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<213> Mus musculus

<400> 22

Gly Val Tyr Tyr Cys Trp Gln Gly Thr His Ser Pro Leu Thr Phe Gly⁻
1 5 10 15

Ala Gly Thr Lys
20

<210> 23
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<213> Mus musculus

<400> 23

Gly Asp Ile Asn Pro Asn Asn Gly Tyr Thr Ile Tyr Asn Gln Lys Val
1 5 10 15

Lys Gly Lys Ala
20

<210> 24
<211> 20
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<213> Mus musculus

<400> 24

Ala Val Tyr Tyr Cys Ala Arg Ser Gly Ser Arg Phe Asp Tyr Trp Gly
1 5 10 15

Glu Gly Thr Thr
20

<210> 25
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<212> PRT
<213> Mus musculus

<400> 25

Val Tyr Phe Cys Gln Gln Ser Asn Ser Trp Pro Val His Ala Arg Gly
1 5 10 15

Gly Gly Thr Lys
20